1. The distance from the Y-axis to point K is 1/3 of the distance from the X-axis to point K. If the coordinates of K are (-3, y), what is the distance between point K and X-axis?

A. 1/2
B. 1
C. 3
D. 4.5
E. 9.

2. What is the area of a region enclosed by |x/3|+|y/9|=10?

A. 675
B. 1350
C. 2700
D. 5400
E. 10800

3. Three workers, A, B, and C, can complete a certain task in 10, 5 and x hours respectively. A starts working alone and 2 hours later B joins. After another 2 hours joins C. After that A, B, and C together complete the task in 15 minutes. What is the value of x?

A. 1
B. 1.25
C. 2
D. 2.5
E. 4

4. A draining pipe can empty a pool in 4 hours. On a rainy day, when the pool is full, the draining pipe is opened and the pool is emptied in 6 hours. If rain inflow into the pool is 3 liters per hour, what is the capacity of the pool?

A. 9 liters
B. 18 liters
C. 27 liters
D. 36 liters
E. 45 iters

5. For a certain set of numbers, if x is in the set, then both -x^2 and -x^3 are also in the set. If the number 1/2 is in the set , which of the following must also be in the set ?

I. -1/64
II. 1/64
III. 1/2^(1/3)

A. I only,
B. II only,
C. III only,
D. I and II only
E. I, II and III

6. A team contributes total of $399 from its members. If each member contributed at least $10, and no one contributed $19, what is the greatest number of members the club could have?

A. 37
B. 38
C. 39
D. 40
E. 41

7. Mary spent 64 percent of her salary on food (including meat) and 16% of her salary on meat. What percent of the salary spent on food were not spent on meat?

A. 16%
B. 25%
C. 32%
D. 48%
E. 75%

8. Usually Holly leaves home to school at 9:00, however today she left home 20 minutes later. In order to be at school on time she increased her usual speed by 20% and still was at school 15 minutes later than usual. What is her usual time from home to school?

A. 15 minutes
B. 20 minutes
C. 25 minutes
D. 30 minutes
E. 210 minutes

9. If x and y are integers and x + y = -12, which of the following must be true?

A. Both x and y are negative
B. xy > 0
C. If y < 0, then x > 0
D. If y > 0, then x < 0
E. x - y > 0

10. If n is a non-negative integer and the remainder when 3^n is divided by 4 is a multiple of 3, then which of the following must be true?

I. n^2 divided by 4 yields the reminder of 1
II. (-2)^n is less than 0
III. n is a prime number

A. I only
B. II only
C. III only
D. I and II only
E. II and III only

BONUS QUESTION:
11. Certain bowl contains 5 red marbles and 3 blue marbles only. One by one, every marble is drawn at random and without replacement. What is the probability that the seventh marble drawn is NOT blue?

A. 7/8
B. 3/4
C. 2/3
D. 5/8
E. 3/8